P0944

Managing Banana Genetic Resources and Genomic Information with the Triplet Drupal/Tripal/Chado

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Room:

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Unraveling the genetic diversity held in genebanks on a large scale is underway, given the advances in NGS-based technologies that produce high-density genetic markers for a large number of samples at low cost. As SNP markers are being mapped on the reference genomes, it is important to develop interoperable system for managing both genomic data and genetic resources. The latter are often managed through bespoke information systems. The Musa Germplasm Information System (MGIS), the main banana genetic resource website, has recently been developed to address those needs in a convenient and flexible way. First of all, we decided to head for a generic database schema, such as CHADO, and to use a robust content management system such as Drupal as the web interface. The Tripal module provides the “glue” between these two parts and drastically reduces development time. Using this trio, we were able to quickly recreate in few months a complete and scalable site and expand it with new features. We now have a germplasm management system allowing collection browsing, and accession browsing, searching and ordering. Accession passport data have been enriched by geographical data, phenotyping characterization data, and information from diversity studies based on molecular markers and SNPs. As a first-use case, such genotyping studies allow linking with the Banana Genome Hub (BGH) website to explore these data in the genome context.

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Meeting Information

When:
January 10 - 14, 2015
Where:
San Diego, CA